ABSTRAK

Penelitian ini bertujuan untuk mengembangkan LKS praktikum berbasis inkuiri terbimbing pada topik reaksi pengendapan dalam menghilangkan kesadahan air. Metode penelitian yang digunakan adalah penelitian dan pengembangan yang dibatasi pada studi pendahuluan (studi kepustakaan, survei lapangan dan penyusunan produk awal) dan pengembangan model yang dilakukan dengan uji coba terbatas. Hasil analisis terhadap buku sumber dan survei lapangan menunjukkan karakteristik LKS praktikum reaksi pengendapan pada materi hasil kali kelarutan masih berbentuk *cookbook*. Hasil optimasi prosedur praktikum reaksi pengendapan dalam menghilangkan kesadahan air diperoleh konsentrasi Ca^{2+} dalam air sadah adalah 0,015 M dan konsentrasi larutan Na_2CO_3 adalah 0,07 M. Karakteristik LKS praktikum berbasis inkuiri terbimbing pada reaksi pengendapan dalam menghilangkan kesadahan air berisikan fenomena dan arahan-arahan yang sesuai dengan tahap-tahap inkuiri untuk menuntun siswa melakukan praktikum. Tingkat keterlaksanaan praktikum menggunakan LKS yang dikembangkan berdasarkan tahapan inkuiri yang dilakukan siswa tergolong sangat baik (95,71%) dan keterlaksanaan berdasarkan jawaban siswa terhadap tugas dalam LKS tergolong baik (77,76%). Respon siswa terhadap praktikum menggunakan LKS yang dikembangkan tergolong baik (79,58%). Penilaian guru dan dosen terhadap LKS yang dikembangkan berdasarkan kesesuaian konsep, tata bahasa serta tata letak dan perwajahan tergolong sangat baik (82,72%).

Kata kunci: Lembar Kerja Siswa, Inkuiri Terbimbing, Reaksi Pengendapan

ABSTRACT

The aims of this research is to develop a Guided Inquiry Lab-Based Student Worksheet of Precipitating Reaction in Removal Hardness Water. Research method that is being conducted is research and development that is limited by a preliminary studies (literature studies, field surveys and preparations of initial product) and development of model (within limited test). Result of literature studies and field survey show that most of lab worksheet are cookbook. Optimization result of lab procedure precipitating reaction in removal hardness water that was conducted are 0,015 M Ca^{2+} ions in hardness water sample and 0,07 M Na_2CO_3 solutions. Characteristic of lab-based student worksheet that was developed contained of phenomenon and instructions that suitable with inquiry phases to guided student doing their experiment. Lab-experiment feasibility achieved by using guided inquiry lab-based worksheet based on inquiry phases that conducted by student were found very good (95,71%). Lab-experiment feasibility achieved based on student answers of the task in the worksheet were found good (77,76%). Student responses of experiments using developed lab-worksheet are found good (79,58%). The evaluation of design teachers and lectures of the developed students worksheet based on suitability of concept, grammar, layout and appearance were very good (82,72%).

Key words: Lab worksheet, Guided-inquiry, predicting precipitate reaction